

U.S. Department of Commerce
National Institute of Standards and Technology
Gaithersburg, MD 20899

Certificate Number: 91-026
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National Type Evaluation Program
Certificate of Conformance
for Weighing and Measuring Devices

For:

Jewelers Scale
Digital Electronic
Model: AE1000C/49
 n_{\max} : 102,500
Capacity: 1025 x .01 c
Platform: 80 mm diameter

Accuracy Class: I

Submitted by:

Mettler Instruments Corporation
Box 71
Princeton-Hightstown Road
Hightstown, NJ 08520-0071
Tele: (609)-448-3000
Contact: Dr. Walter Kupper

Standard Features and Options

Capacity 1025 c d=.001 c e=.01 c
Force restoration technology
Initial zero setting mechanism
Semi-automatic zero
Zero tracking
Built-in calibration weight

RS232 output optional

Temperature Range: 15 to 25 °C (59 to 77 °F)

This device was evaluated under the National Type Evaluation Program (NTEP) and was found to comply with the applicable technical requirements of Handbook 44, "Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

Original signed by Chief, Office of Weights and Measures

Issue Date: February 1, 1991

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Mettler Instrument Corporation
Digital Electronic Jewelers Scale
Model: AE1000C/49

Application: For weighing precious gems.

Identification: The serial number identification is on the right side at the rear of the balance. The /49 suffix, indicating the legal for trade version, will be located on the label with the serial number. Other required markings are located on the front bezel.

Sealing: None required on Class I devices.

Operation: This scale may zero loads in excess of 5 percent of capacity when power is supplied via the power plug or the power switch. This is considered appropriate for this scale model because the scale is class I and the design is such that the scale should be accurate to its maximum indicated quantity regardless of the load that is zeroed. The scale may or may not indicate to capacity depending upon the load that is zeroed in addition to the dead load. When the designed dead load is zeroed, the scale will indicate to its rated capacity. The built-in calibration weight allows the user to check the calibration or recalibrate the scale after entering the calibration mode. The scale must be tested with weights of OIML Class F1 or equivalent.

Test Conditions: The emphasis of the evaluation was on device design and performance. The scale was tested over a temperature range of 15 to 25 °C (59 to 77 °F) with about 7% of capacity rezeroed using the initial zero and applying buoyancy corrections. The scale was tested over a power supply voltage range of 100 to 130 VAC. Tests of the scale performance were made by rezeroing varying amounts of dead load including no load, 7% of scale capacity, and other loads up to 500 carats. The results of the examination indicate that the device complies with the applicable requirements of NIST Handbook 44.

Type Evaluation Criteria Used: NIST Handbook 44, 1991 Edition

Tested By: R. Andersen and E. Szesnat